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ABSTRACT

Course content validation was developed as a diagnostic model to ascertain the extent and quality of implementation of individualized instruction at College of the Mainland (COM). This process diagnoses the qualit, of instruction as judged by instructional peers at other institutions. Content raters are sent course syllabi, course documents, selected examinations, and descriptions of the course target group and COM student body, and are asked to fill out a checklist including questions relating to the course rationale, learning objectives, learning activities, testing techniques, and course organization. To date, 27 courses have been sent to 135 raters throughout the United States. The 116 rating checklists which were returned represent an 86 percent response rate. The raters felt that the courses at COM have well-developed behavioral objectives, and that the course objectives are relevant, challinging, and appropriate for the target group. Overall, content standards are high, and these high standards are reinforced with rigorous testing procedures. However, only 15 percent of the raters encountered courses which are open-entry/exit in format, and only 11 percent encountered self-paced courses, implying alternate learning activities. Tabulated responses to 24 of the 27 checklist questions are included in this document. (Author/NHM)

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COLLEGE OF THE MAINLAND

Course Content Validation

Rounds I and II

SUMMARY

Prepared by

COLLEGE ASSOCIATES, INC.

Austin, Texas

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JC 760 325

College of the Mainland is undertaking a comprehensive effort toward improving instructional effectiveness. Instructional improvement is not a novel process at the college. Over the last five years there have been numerous programs directed toward the betterment of instruction. Extensive in-service training has provided faculty much exposure to the nature, scope and strategies of individualized instruction.

College of the Mainland has made an institution-wide commitment to individualized instruction. Briefly stated, instruction is individualized when:

(a) learning outcomes are specified in terms of behavioral objectives;

(b) students can master objectives through alternate learning activities; and,

(c) students can learn at their own pace (this criterion does not imply that students be offered "independent study". Self-pacing is suggested as a result of research findings which support the contention that learning rates vary from individual to individual).

Despite a long standing commitment to individualized instruction, the extent of implementation is not known. It was to ascertain the level of instructional development that diagnostic models

were designed and applied.

One such diagnostic model is course content validation. This process serves to diagnose the quality of instruction, as judged by instructional peers.

In designing the strategy for content validation several criteria were considered:

(1) Content can best be validated by persons having expertise in the instructional specialty being diagnosed;

(2) Objectivity requires that content validation be done by persons outside the institution.

(3) It is important that persons selected as course content evaluators have a well-developed understanding of individualized instruction.

Content raters were selected on the basis of these criteria. Each rater was sent the following:

* course syllabi
* course documents
* selected examinations
* a description of the course target group
* a description of the student body at C.O.M., and
* a checklist.

Development of the checklist was discussed extensively in the preface to the Findings of Round I of course validation, and need not be duplicated here. The checklist contains questions relating to the rationale, learning objectives, learning activities, testing techniques, and organization of the course being rated.

Since individualized instruction is a rather complex concept, a number of items were included in the rating instrument to determine the level of an open-entry/exit, self-paced instruction. The rating instrument contains twenty-seven questions. Twenty four questions require structured responses, three permit open-ended response.

To date, two rounds of courses have been rated for content and organization. In Rounds I and II, twenty-seven courses were sent to approximately 135 raters throughout the United States: 116 rating checklists were returned. This represents a very favorable response rate of eighty-six per cent.

Following is a question by question description and discussion of the rating results.

ROUND I

Auto 165 - Auto Air Conditioning
Biology 141, 142 - General Biology
Business Communications 231 - Business Communications
Economics 231 - Principles
Electronics 141 - Electrical Electronics Circuits I
English 131 - Composition & Rhetoric in Communication
History 135, 136 - U. S. History
Nursing 161 - Physical and Mental Health and Illness
Nursing 262 - Physical and Mental Health and Illness
P. E. 111 - Foundations of Fitness and Health
Psychology 231 - Introductory

ROUND II

Art 131, 132 - Basic Design I, II
Chemistry 141, 142 - General Inorganic
Cooperative Education
English 132 - Composition and Reading
Introduction to Business 131 - Introduction
Management 231 - Principles
Marketing 231 - Principles
Math 231, 232 - Calculus I, II
P. E. 117 - Beginning Tennis
Political Science 235, 235 - American, National, and State Government
Sociology 131 - Introductory
Speech 131 - Fundamentals of Speech
Psychology 233 - Child Growth and Development

QUESTIONS

1. Does the syllabus attempt to justify the course content to the student?

VALUE	CODE	PERCENTAGE
No justification	1	2
	2	9
	3	19
	4	37
Excellent justification	5	33

Raters were asked about the extent to which course content was justified for students. Generally, it is recognized that a rationale provides positive inducement for students to undertake the learning process. Eighty-nine per cent of the raters assessed courses which provided average and above average justification of course content to students.

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2. Are the outcomes referred to in the objectives specific and measurable?

VALUE	CODE	PERCENTAGE
Vague and Unmeasurable	1	7
	2	7
	3	4
	4	32
Specific and Measurable	5	50

This question sought to ascertain the extent to which learning outcomes, (not necessarily "objectives") were specific and measurable. Well-written course objectives should describe terminal behaviors which are both specific and measurable. Eighty-six

per cent (eight out of ten of the raters) encountered courses average and above average in specificity and measurability.

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3. How would you describe the terminal competencies of the course?

Value	Code	Percentage
Simple, Rote, Memorization	1	1
Lacking challenge	2	4
	3	21
	4	46
Challenging, requiring Complex Mental Skills	5	28

Difficulty of terminal competencies was rated in this question. Raters were asked to judge the quality of Objectives' content. Only five per cent encountered competencies which were considered simple, rote or unchallenging. The remainder rated courses which were average or above average in requiring complex mental skills and challenges to the learner.

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4. Do objectives follow a logical sequence from ease to difficulty?

Value	Code	Percentage
No	1	6
	2	6
	3	14
	4	38
Yes	5	36

A well-constructed course should ideally progress from a starting point of relative ease, to more sequentially difficult tasks. In this fashion, initial success is likely to be experienced by students. As students develop more positive feelings toward course

content, they will in all likelihood be better prepared for more difficult cognitive objectives later in the course. Eighty-eight per cent of the raters encountered courses that have average or above average organization along a progression from ease to difficulty.

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5. Is there any effort to make the objectives relevant to the student?

Value	Code	Percentage
No	1	6
	2	15
	3	13
	4	24
Yes	5	42

Numerous, well-supported arguments have been advanced to suggest that learning is more likely to occur when objectives attain relevance to students. Seventy-nine per cent of the raters evaluated courses average and above average in terms of offering relevance to students.

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6. Given the student target group, would you use the same objectives if this were your course?

Value	Code	Percentage
None	1	5
	2	10
	3	27
	4	42
All	5	16

In order that multiple assessments of each element of the course be obtained, raters were also asked to judge whether they

would use similar objectives for a similar course. Sixteen per cent would use "All". Five per cent would use "none". Eighty-five per cent rated objectives average and above average in terms of adoption for similar courses and target group.

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7. If a student mastered all requirements of this course with an "A" what grade would you assign if students performed identically in your class?

Value	Code	Percentage
F	1	0
D	2	0
C	3	5
B	4	1
A	5	94

A relatively broad content assessment should derive from a judgement as to how well an "A" student in the course being rated would do in the rater's course. Raters would award students "A's" at a level approaching statistical significance at .05 probability. In other words, there is substantial probability that raters would not award less than an "A".

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8. If a student mastered the course objectives would he/she be prepared for the next course in sequence (if any) at your college?

Value	Code	Percentage
No	1	0
	2	1
	3	7
	4	22
Yes	5	70

The extent to which the course under scrutiny would prepare a student for more advanced classwork was evaluated. Ninty-two per cent of raters judged students to be above average in preparation for subsequent courses.

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9. Would a senior college accept competencies required here as equivalent of its own course, if applicable?

Value	Code	Percentage
No	1	4
	2	2
	3	6
	4	21
Yes	5	67

Since each question of the instrument might possibly be interpreted out of context, multiple measures of course content quality were sought.

Ninety-four per cent of raters felt courses would serve students well in comparison to similar senior college courses.

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10. What is your overall evaluation of the content standards described in the syllabus?

Value	Code	Percentage
Poor, very low standards	1	1
	2	2
	3	10
	4	35
Excellent, high standards	5	52

A final question addressing the quality of course content dealt with overall impressions. On a continuum flanked by poor low standards, and excellent, high standards, 97 per cent of the raters judged courses average and above average in terms of excellence.

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11. Could a student enroll or complete this course at any time?

Value	Code	Percentage
Yes	1	15
No	2	47
Not Indicated	3	38

Course organization provides a measure of whether or not individualization has occurred. Ideally, in a truly individualized course, students should be able to progress at their own rate of learning. This is not to imply that instruction need be "independent study." Community college students are often unable to generate motivation necessary to carry them through a semester of loosely non-supervised activity. However, if it is possible for a student to enroll and complete a course at different points in a semester, without penalty, then some instructional development could be said to have occurred.

Fifteen per cent of raters encountered courses which permit open entry-exit.

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12. Could a student take as long as he/she wanted, and still complete the course with an "A"?

Value	Code	Percentage
Yes	1	11
No	2	55
Not indicated	3	34

If students are unable to complete a course on time, they should be allowed more time to do so without penalty. Eleven per cent of raters evaluated courses which allow students to extend past semester time limits and still receive an "A".

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13. Are alternate learning activities provided so that students could complete the course without attending lectures?

Value	Code	Percentage
Yes	1	19
No	2	56
Not indicated	3	25

About one in five raters encountered courses which offer students alternate learning activities to lecture. This question is rather unqualified - asking whether or not a course could be completed without attending what may be interpreted as a single lecture. It was intended to ascertain the overall extent to which lectures were the sole instructional vehicle.

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14. Do learning activities prescribe active or passive learner roles?

Value	Code	Percentage
Active	1	45
	2	22
	3	19
	4	10
Passive	5	4

To the extent that "good" instruction is known to occur, a student should play an active, rather than passive, role in the learning process. Eighty-six per cent of the raters felt courses to be average or above average in prescribing that students play an active learner's role.

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15. According to the syllabus media are used:

Value	Code	Percentage
Never	1	7
	2	9
	3	27
	4	43
With Frequency	5	14

Media use is regarded as a desirable concomitant of individualized instruction. Seven of one hundred of the raters judged courses which never use media. Eighty-four per cent of the raters scored courses average and above average in frequency of media use.

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16. Could a student select from alternate learning activities to master objectives?

Value	Code	Percentage
Yes	1	48
No	2	34
Not Indicated	3	18

On a less global scale, fifty per cent of raters encountered courses which offered alternate learning activities for mastery of some objectives.

17. Do learning activities provide opportunities to master the specific tasks?

Value	Code	Percentage
No	1	6
	2	3
	3	14
	4	29
Yes	5	48

Appropriateness of learning tasks, in light of objectives was evaluated. Only nine per cent of raters scored courses below average on this issue. Seventy-seven per cent scored above average.

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18. Do tests require students to put learned material together in new ways?

Value	Code	Percentage
No	1	14
Sometimes	2	58
Yes	3	28

While objectives may be of very high quality in structure and content it is equally important that tests provide an accurate diagosis of the extent to which objectives are achieved. Objectives might resound of challenge, complexity and higher order mental skills, but without the evaluation system to measure mastery, they may be hollow.

One index of test quality is to gauge whether tests require students to deal with concepts in a different manner from which they were learned. Eighty-six per cent of the raters encountered courses in which tests did require recomposition.

19. Do tests require students to answer questions not specified in objectives?

Value	Code	Percentage
No	1	59
Sometimes	2	27
Yes	3	14

About four out of ten raters felt questions went beyond the scope of objectives.

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20. Are there enough test items to evaluate mastery of the objectives in each unit?

Value	Code	Percentage
No	1	10
Sometimes	2	23
Yes	3	67

Only ten per cent of the respondents felt there were not enough test items to evaluate mastery of objectives.

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21. Are the test items geared for the level of competency called for in the objectives?

Value	Code	Percentage
No	1	3
Sometimes	2	12
Yes	3	85

Test items, according to raters, are geared for the level of competency called for in objectives. Affirmative responses are probable at the .05 level of confidence.

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22. Given the same objectives, how would students in your class consider the test items?

Value	Code	Percentage
Extremely Easy	1	0
	2	7
	3	49
	4	37
Extremely Difficult	5	7

One would not expect a rater to judge that his/her students would find test items "extremely difficult." Such a statement might sound as if the rater's students were not up to par. However, seven per cent did rate questions as extremely difficult. Ninety-three per cent rated test items average and above average in difficulty, and none asserted test items were "extremely easy."

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23. Given the course objectives, would the student target group be able to complete the test in the time allotted?

Value	Code	Percentage
No	1	2
Possibly	2	38
Yes	3	60

Two per cent of the raters felt tests did not give students adequate time for completion. The remaining ninety-eight per cent responded "possibly" and "yes".

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24. Generally, how would you describe the test items?

Value	Code	Percentage
Very poorly written	1	3
	2	4
	3	18
	4	54
Extremely well-written	5	21

Raters were asked to render an overall evaluation of test items. On a continuum bounded by "very poorly written", three per cent found poorly written tests, twenty per cent found tests to be extremely well written. Ninety-seven per cent test items average and above average.

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Questions 25, 26 and 27 requested an open-ended response from raters. Raters were asked which objectives should be deleted, and which should be added. In addition, broad and general comments as to the overall quality of the course were solicited. These comments would serve only a limited, anecdotal purpose in the overall summary. They can be perused verbatim on individual course evaluations.

SUMMARY.

Courses rated in Rounds I and II have well-developed behavioral objectives. Course objectives received favorable ratings in terms of relevance, challenge, and appropriateness for the target group.

Requirements for courses rated in Rounds I and II are demanding. "A" students at C.O.M. would be "A" students' elsewhere. Students completing C.O.M. courses could be expected to do well at universities and other Community Colleges. Overall, content standards received excellent ratings. Only three in one hundred raters encountered courses below average in overall quality.

Content is one element, instructional delivery techniques are another. Only fifteen per cent of the raters encountered courses which are open-entry /exit in format. Even fewer, eleven per cent, rated courses which permit students to learn at their own pace, without penalty.

A necessary prerequisite of open entry/exit and self-paced instruction is that alternate learning techniques be made available to students, while some portions of courses can be accomplished with alternate activities, lecture is the predominant instructional delivery strategy. Extensive use of media is not apparent from the materials supplied to raters.

Tests do not appear to be incongrous with objectives. Raters found test items to be consistent with terminal behaviors specified in course objectives.

Ratings received in Rounds I and II yield several conclusions:

(1) Course standards are demanding to the extent that they constitute more than adequate preparation for transfer.

(2) High standards are reinforced with rigorous testing procedures.

(3) The area least favorably evaluated concerned class structure permitting alternate learning activities and self-pacing.

The final conclusion in light of the generally excellent evaluation of other aspects of structure, content, and methodology, requires further elaboration and an attempt to explain the discrepancy. One factor may be purely semantics. That is, the term "behavioral objective" has been clearly defined (by Mager and others) and has been used to the extent that its meaning approaches universality. However, "self-pacing" lacks the clear definitional parameters which characterize objectives. It may be interpreted as complete student independence from faculty guidelines, or it may represent re-cycling or re-testing within units of varying lengths.

The presence or absence of lectures as components of an

individualized course of instruction has frequently been a point of contention. In Postlewaithe's early work on audio-tutorial biology, a pioneer effort in self-paced instruction, his first major revision was to reinstate both general assembly sessions and small group discussions. Subsequent research has supported the need for initial lecture sessions to orient the students to the use of an individualized format.

Therefore, the results of outside evaluation to date should serve as signals, suggesting that self-pacing and alternate learning activities should be examined, but it should not be accepted as definitive evidence that these components are below par. Not only should the components be examined, but attention should also be afforded to the definition of these terms in the course documents, and to the proportion of lecture and alternate activities selected for inclusion in the courses.

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